## Glossary

## Glossary of Terms

**100-year floodplain:** The area along the river corridor that would receive floodwaters during a 100-year flood event. A 100-year flood event has the probability of occurring 1% of the time during any given year. If a 100-year flood event occurs, the following year will still have the same probability for occurrence of a 100-year event. For the purposes of this plan, the 100-year floodplain also includes wetlands and meadows associated with the hydrologic and ecological processes of the river.

**Affected environment:** Existing biological, physical, social, and economic conditions of an area that are subject to change, both directly and indirectly, as a result of a proposed human action.

**Alluvial:** An adjective referring to alluvium, which are sediments deposited by erosional processes, usually by streams.

**Alluvium:** A general term for clay, silt, sand, gravel, or similar unconsolidated rock fragments or particles deposited during comparatively recent geologic time by a stream or other body of running water.

**Alternatives:** Sets of management elements that represent a range of options for how, or whether to proceed with a proposed project. An environmental impact statement, such the one in this *Merced River Plan*, analyzes the potential environmental and social impacts of the range of alternatives presented.

Annosus root disease: Annosus root disease is a widespread native fungus. In pines, the fungus spreads through the root system, attacking and killing the inner bark and sapwood. Within two to six years after initial infection, the fungus reaches the root crown and girdles the tree. The tree dies, but the fungus remains active as a saprophytic wood-decaying organism within roots and the butt of the dead tree. Pines weakened by annosus root disease are often killed by bark beetles. Incense-cedars, however, are not affected by beetles and will stand green for many years, until the disease finally weakens the structure enough to cause failure. Cedars are thought to act as a reservoir for annosus root disease because they take so long to die.

**Aquifer:** A geologic formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

**Bank:** The area below the ordinary high water mark in a river or stream. The ordinary high water mark is defined as the 2.33-year flood by the U.S. Army Corps of Engineers. See also, "stream bank."

**Base zone:** The zone reflecting the general desired condition for a segment of the river corridor. Localized exceptions to the base zone are indicated by smaller zones within the base zone and are shown on the alternatives maps.

**Basin:** Refers to a drainage basin. A region or area bounded by a drainage divide and occupied by a drainage system. Specifically, an area that gathers water originating as precipitation and contributes it to a particular stream channel or system of channels. Synonym: watershed.

**Batholith:** Refers to a very large body of plutonic rock. The Sierra Nevada batholith comprises several smaller plutons that represent the repeated intrusions of granitic magma. From the Greek *bathos*, deep, and *lithos*, rock.

**Bed:** Refers to the relatively flat or level bottom (substrate) of a body of water, as in a lakebed or riverbed.

**Bedload:** Material (e.g., sand, gravel, and cobbles) carried by a river. It is typically suspended in the water column with high enough flow velocities, and then deposited when flow velocities slow.

**Best Management Practices (BMPs):** Effective, feasible (including technological, economic, and institutional considerations) conservation practices and land- and water-management measures that avoid or minimize adverse impacts to natural and cultural resources. BMPs may include schedules for activities, prohibitions, maintenance guidelines, and other management practices.

**Biodiversity:** Biodiversity, or biological diversity, is generally accepted to include genetic diversity within species, species diversity, and a full range of biological community types. The concept is that a landscape is healthy when it includes stable populations of native species that are well distributed across the landscape.

**Bog:** Peat deposits in areas with a high water table and little to no significant inflow or outflow streams. Bogs support acid-loving vegetation, especially mosses but are generally exceedingly deficient in available plant nutrients.

**Boundaries:** The areas that receive protection under the Wild and Scenic Rivers Act. Boundaries include an average of not more than 320 acres of land per mile, measured from the ordinary high water mark on both sides of the river.

**California Wilderness Act of 1984:** A federal law that designated a number of additional wilderness areas in California, including those in Yosemite National Park.

**Cambium:** A thin, formative layer between the xylem and phloem of most vascular plants that gives rise to new cells and is responsible for secondary growth.

**CEQ Regulations:** The Council on Environmental Quality (CEQ) was established by the National Environmental Policy Act (see NEPA) and given the responsibility for developing federal environmental policy and overseeing the implementation of NEPA by federal agencies.

**Chert:** A dense sedimentary rock containing quartz, possibly opal, calcite, and remains of siliceous and other organisms. Ancient seafloor deposits.

**Choosing by Advantages (CBA):** A decision-making process used as part of developing the *Merced River Plan* to analyze and refine the alternatives.

**Cirques:** A deep-walled, half-bowl-like recess or hollow situated high on a mountain at the head of a glacial valley, produced by erosion of a glacier.

**Classifications:** The status of rivers or river segments under the Wild and Scenic Rivers Act ("wild," "scenic," or "recreational"). Classification is based on the existing level of access and human alteration of the site.

**Comprehensive Management Plan:** A plan to protect and enhance a Wild and Scenic River. The *Merced River Plan* is the National Park Service's comprehensive management plan for segments of the Merced River corridor under its jurisdiction.

**Concession Services Plan:** The plan that guides the management of the concession enterprises, such as lodging, food services, retail and other services in Yosemite National Park.

**Crownsprout:** An adaptation of plants to produce new growth from a stump or burl typically damaged by cutting or fire. New growth often appears as circular or crown-like.

**Cryptogamic crust:** Cryptogams, or cryptogamic crusts, are a thin crust made up of mosses, lichens, algae, and bacteria. These organisms form a biotic layer over unvegetated areas between shrubs, grasses, and flowering plants in undisturbed arid and semi-arid lands of the world, including the alpine and subalpine zones of the upper Merced River. Cryptogams function as soil builders forming a spongy layer that protects against erosion, absorbs moisture, and provides nitrogen and other nutrients for plant growth. When frozen, the cryptogamic crust uplifts and cracks, providing seed germination sites.

**Day excursion visitor:** One of two categories of day visitors. These are visitors who do not spend the night in the park or in the surrounding local counties, spending only one day in Yosemite before leaving the region to spend the night at home or in lodging outside the area. The other category of day visitors stay overnight locally outside of the park (the surrounding region consisting of Madera, Mariposa, Merced, Mono, and Tuolumne Counties) as part of their visit to Yosemite (referred to as "local overnighter").

**Day visitor:** Visitors that do not stay overnight in the park. Includes both local overnighters and day excursion visitors.

**Ecosystem:** An ecosystem can be defined as a geographically identifiable area that encompasses unique physical and biological characteristics. It is the sum of the plant community, animal community, and environment in a particular region or habitat.

**El Portal Administrative Site:** The area outside the western boundary of the park along Highway 140 under the jurisdiction of the National Park Service used to locate park operations and administrative facilities for Yosemite National Park.

**Emergent wetland:** A wetland characterized by frequent or continual inundation dominated by herbaceous species of plants typically rooted underwater and emerging into air (e.g., cattails, rushes). The emergent wetland class is characterized by erect, rooted, herbaceous hydrophytes (e.g., cattails, rushes), excluding mosses and lichens. This vegetation is present for most of the growing season in most years. Perennial plants usually dominate these wetlands. All water regimes are included, except sub-tidal and irregularly exposed.

**Environmental Impact Statement (EIS):** A public document required under the National Environmental Policy Act (NEPA) that identifies and analyzes activities that might affect the human and natural environment.

**Erratics:** A rock fragment of any size carried by glacial ice, or by floating ice, deposited at some distance from the outcrop of origin.

Facilities: Buildings and the associated supporting infrastructure such as roads, trails, and utilities.

**Fen:** An open wetland system with very high nutrients and productivity that receives some drainage from surrounding mineral soils and usually supports marsh-like vegetation (sedge, rushes, reeds, horsetails, grasses).

**Fire return interval:** The typical period of time between naturally occurring fires.

**Floodplain:** A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

**Fluvial:** Of or pertaining to a river. Fluvial is a technical term used to indicate the presence or interaction of a river or stream within the landform.

**Fluvial geomorphic response:** The interaction of a flowing river with the surrounding landform.

**Frazil ice:** A spongy, slushy, cinder-like mass or aggregate of ice crystals collected by adhesion or regelation (fusion) and suspended in super-cooled turbulent water, especially common in rapidly flowing stream. Frazil ice sometimes occurs at Yosemite Falls.

**Frazil ice flooding:** Downslope movement of accumulated frazil ice.

**Free-flowing river:** Existing or flowing in natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway (as defined in the Wild and Scenic Rivers Act – 16 USC 1286 [b]).

**Glacial till:** Unconsolidated mixtures of clay, silt, sand, and gravel deposited directly by and underneath a glacier without being reworked by melt water.

**Glaciation:** Effects on landforms produced by the presence and movement of a glacier.

**Geomorphic:** Of or pertaining to the form of the Earth or of its surface features.

**Granitic rocks:** Igneous rocks (intrusive magma) that have cooled slowly below the Earth's surface typically consisting of quartz, feldspar, and mica. In contrast to granitic rocks, if magma erupts at the Earth's surface, it is referred to as lava. Lava, when cooled, forms volcanic rocks.

**Groundwater:** All subsurface water (below soil/ground surface), distinct from surface water.

**Groundwater recharge:** The process involved in the absorption and addition of surface water to the zone of saturation or aquifer.

**Hazardous material:** A substance or combination of substances, that, because of quantity, concentration, or physical, chemical, or infectious characteristics, may either: (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed.

**Hazardous waste:** Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, spilled, or contaminated, or that are being stored temporarily prior to proper disposal.

**Headwaters:** The point or area of origin for a river or stream.

**High Sierra Camps:** Overnight lodging facilities operated by the concessioner in the wilderness areas that include tent cabins, food service, and other amenities. Merced Lake High Sierra Camp is one of the High Sierra Camps.

**Hydrodynamics:** The flow, fluctuation, and character of water once in a wetland or system.

**Hydrophytes:** Any plant growing in water or in a substrate that is at least periodically deficient in oxygen as a result of excessive water. Plants typically found in wetland habitats.

**Hydrogeomorphic classification:** A wetland classification system that distinguishes wetland features based on position in the landscape, geomorphic setting, and hydrodynamics.

**Hydrologic response:** The response of a watershed due to precipitation. Usually refers to the resulting streamflow from a precipitation event.

**Intrusive:** A body of magma that is injected or is intruded into the pre-existing rock.

**Impoundment:** A dam or other structure to obstruct the flow of water in a river or stream.

**Inoculum:** Material used for inoculation. As used in Vegetation section of this document, inoculum refers to naturally occurring fungal material.

**Krummholz:** Krummholz is the name given to dwarfed and stunted trees that occupy environments characterized by intense solar radiation, high winds, excessive salts, and/or large diurnal temperature fluctuations.

**Ladder fuels:** Dead or otherwise flammable material that provides a nexus between surface (ground) fuel layers (e.g., grasses) and aerial or canopy (e.g., trees) fuel layers. Ladder fuels are typically composed of immature trees, shrubs, or dead or downed branches.

**Life zone:** The area, often defined by temperature or altitude, where the form of the vegetation is uniform (e.g., grasslands).

**Limnetic:** All deepwater habitats within a lacustrine system. Many small lacustrine systems have no limnetic subsystem. (See lacustrine.)

**Liquefaction:** A process by which water-saturated materials (including soil, sediment, and certain types of volcanic deposits) lose strength and may fail during strong groundshaking. The transformation of granular material from a solid state into a liquefied state as a consequence of increased pore-water pressure.

**Local overnighter:** One of two categories of day visitors. These are visitors who stay overnight locally outside of the park as part of their visit to Yosemite (the surrounding region consisting of Madera, Mariposa, Merced, Mono, and Tuolumne Counties). The other category of day visitors does not spend the night in the park or in the surrounding local counties, spending only one day in Yosemite before leaving the region to spend the night at home or in lodging outside the area (referred to as "day excursion visitor").

**Lacustrine:** Of or relating to lakes.

**Main stem** (**Merced River**): The sections of the Merced River beginning at the headwaters near the Sierra Crest and continuing through Yosemite Valley, the Merced River gorge, El Portal, and further downstream.

**Management zone:** A geographical area for which management directions or prescriptions have been developed to determine what can and cannot occur in terms of resource management, visitor use, access, facilities or development, and park operations.

**Metamorphic rock:** Metamorphic refers to rocks derived from pre-existing rocks by mineralological, chemical, structural changes.

**Mitigation:** Activities that will avoid, reduce the severity of, or eliminate an adverse environmental impact.

Moraine: Debris, such as boulders, stones, or sediment deposited by a glacier.

**National Environmental Policy Act (NEPA):** The federal act that requires the development of an environmental impact statement (EIS) for federal actions that might have substantial environmental, social, or other impacts.

**Natural processes:** All processes such as hydrologic, geologic, ecosystemic that are not the result of human manipulation.

**No Action Alternative:** The alternative in a plan and environmental impact statement that proposes to continue current management direction.

**Non-motorized watercraft:** A class of boats that includes rafts, kayaks, inner tubes, and inflatable air mattresses.

**Non-native species:** Species of plants or wildlife that are not native to a particular area and often interfere with natural biological systems.

**Nonpoint pollution sources:** Pollutants that enter the environment from general non-contained locations. Examples of nonpoint sources are roadways, parking lots, and landscaped areas. Pollutants from these locations can include petrochemicals, heavy metals, and fertilizers.

**Non-wilderness:** Areas that have not been designated for special protection under the Wilderness Act.

**Opportunity purchases:** The process of public entities purchasing land as it becomes available from willing sellers on the real estate market. This is in distinction to using nonvoluntary means to compel an owner to sell (e.g., eminent domain).

**Ordinary high water:** The area along the river corridor that would receive floodwaters during a ordinary precipitation year (based on a 2.33-year flood). A 2.33-year flood event has the probability of occurring roughly 50 percent of the time during any given year.

**Outstandingly Remarkable Values (ORVs):** Those resources in the corridor of a Wild and Scenic River that are of special value and warrant protection. ORVs are the "scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values...that shall be protected for the benefit and enjoyment of present and future generations" (16 USC 1272).

**Oxbow:** A closely looping stream meander or lake resembling the U-shaped frame embracing an ox's neck, having an extreme curvature such that only a neck of land is left between two parts of land.

Paleoenvironment: Ancient environment.

Palustrine: The palustrine system was developed to group the vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie, which are found throughout the United States. It also includes the small, shallow, permanent, or intermittent water bodies often called ponds. Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes. They may also occur as islands in lakes or rivers. The Palustrine system includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5%. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 hectares (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 meters at low water; and (4) salinity due to ocean-derived salts less than 0.5%.

**Park overnighter:** Visitors who lodge or camp overnight within Yosemite National Park.

**Particulate matter (PM-10 and PM-2.5):** Fractions of particulate matter characterized by particles with diameters of 10 microns or less (PM-10) or 2.5 microns or less (PM-2.5). Such particles can be inhaled into the air passages and the lungs and can cause adverse health effects. High levels of PM-2.5 are also associated with regional haze and visibility impairment.

**Paternoster lakes:** A chain of lakes in a glacially carved region.

**Pluton:** A general term applied to any body of intrusive igneous rock that originates deep in the earth. Named for Pluto, Greek god of the underworld.

**Point bars:** Depositional areas on the inside of a meander bend. The area where material is deposited along a river, usually on the inside of a meander along a river (e.g., westside of Housekeeping Camp).

**Pool-riffle:** The relationship, usually expressed as a ratio, between the surface area of pools and that of small rapids (riffles) in a given portion of a stream.

**Potential wilderness additions:** Areas officially designated as potential wilderness additions under the California Wilderness Act. This act mandates that "lands designated as potential wilderness additions shall be managed by the Secretary in so far as practicable as wilderness until such time as said lands are designated as wilderness."

**Prescription:** A guideline that directs the management of a specific area by describing the type and intensity of activities, facilities, and park operations that can and cannot occur. See "management zone."

**Pristine:** Unaltered, unpolluted by humans.

**Protohistoric:** Immediately before written history.

**Record of Decision (ROD):** The public document describing the decision made on selecting the "preferred alternative" in an environmental impact statement. See "environmental impact statement."

**Riffle (riffle/pool):** A riffle is part of the natural sequence of a stream pattern as it alters between riffles and pools in the linear direction. Riffles are the steeper, shallower areas where turbulence is usually present due to shallow water flowing over the channel substrate. Pools are the calmer, less steep areas where deeper water is present, typically in a wider channel width. Additionally, there are glides that are linear stream areas where no turbulence is present due to sufficiently deep water but stream velocities are higher than typical of pool areas. Glides are usually not as wide across the stream channel as compared to pools.

**Riparian areas:** The land area and associated vegetation bordering a stream or river.

**Riprap:** A layer of large, durable fragments of broken rocks specially selected and graded, thrown together irregularly or fitted together to prevent erosion by waves or currents.

**Riverine:** Of or relating to a river. A riverine system includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts in excess of 0.5%. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.

**River corridor:** The area within the boundaries of a Wild and Scenic River (e.g., the Merced River corridor).

**River Protection Overlay:** A buffer area within and adjacent to the river that allows for the protection and restoration of natural and aquatic ecosystem processes.

**Rockfall talus zone:** The area extending out from the talus zone and is the area in which individual rocks may travel outward from the talus.

**Roof pendant:** A roof pendant is an isolated and uneroded portion of older country rock, overlying younger granitic pluton rock.

**Section 35:** The area on the South Fork of the Merced River, originally designated by the U.S. Geological Survey, that demarcates the "township of Wawona" and contains intermixed parcels of private and National Park Service lands.

**Sediment:** A particle of soil or rock that was dislodged, entrained, and deposited by surface runoff or a stream. The particle can range in size from microscopic to cobble stones.

**Shoulder season:** The nonpeak park visitation season on either side of peak summer months. For example, the calendar months of April, May, September, and October are included in the shoulder season.

**Snag:** A standing dead tree.

**South Fork (Merced River):** The segments of the Merced River passing through Wawona and entering the main stem west of El Portal.

**Succession:** The process by which vegetation recovers following a disturbance or initially develops on an unvegetated site.

**Talus:** Rock fragments of any size or shape derived from and lying at the base of a cliff or very steep rocky slope. Also refers to outward sloping and accumulated heap of loose broken rock considered as a unit and formed primarily by falling, rolling, and sliding.

**Talus Zone:** Area where the majority of rock materials are deposited during a mass movement (rockfall) event.

**Till:** Glacially transported and unconsolidated material deposited directly by ice, without having been reworked by melt-water. Material size varies widely and can range from clay to boulders.

**Threatened and Endangered Species (TES):** Species of plants that receive special protection under state and/or federal laws. Also referred to as "listed species" or "endangered species."

**User capacity:** As it applies to parks, user capacity is the type and level of visitor use that can be accommodated while sustaining the desired resource and social conditions based on the purpose and objectives of a park unit.

**U-Shaped valley:** A glacially carved valley having a pronounced parabolic cross-sectional profile suggesting the form of a broad letter "U" and characterized by steep sides and a nearly flat bottom.

**Visitor experience:** The perceptions, feelings, and reactions a park visitor has in relationship with the surrounding environment.

**Visitor Experience Resource Protection (VERP):** A process developed for the National Park Service to help manage the impacts of visitor use on the visitor experiences and resource conditions in national parks.

**Walk-in campground:** A campground with consolidated parking areas separated from the individual campsites. Campers walk a short distance from the parking area to their campsites.

**Walk-to campground:** A campground with no parking at the campsite, and no designated associated parking place. These campgrounds would be available for campers arriving in Yosemite Valley without a private vehicle (i.e., by bus, on foot, by bicycle).

Water resources project: Non-FERC licensed projects such as dams, water diversions, fisheries habitat and watershed restoration, bridges and other roadway construction/reconstruction, bank stabilization, channelization, levee, boat ramps and fishing piers that occur within the bed and banks of a designated Wild and Scenic River (IWSRCC 1997:3).

**Watershed:** The region drained by, or contributing water to, a stream, lake, or other body of water. Synonym: basin or drainage basin.

**Wetland:** Wetlands are defined by the U.S. Army Corps of Engineers (CFR, Section 328.3[b], 1986) as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wild and Scenic Rivers: Those rivers receiving special protection under the Wild and Scenic Rivers Act.

**Wilderness:** Those areas protected by the provisions of the 1964 Wilderness Act. These areas are characterized by a lack of human interference in natural processes.

**Wilderness Act of 1964:** The Wilderness Act restricts development and activities to maintain certain places where wilderness conditions predominate.

## Acronyms

APCD Air Pollution Control District

AQMD Air Quality Management District

BLM Bureau of Land Management

BMP Best management practice

CBA Choosing by Advantage

**CDFG** California Department of Fish and Game

**CDMG** California Department of Mines and Geology

CEQ Council on Environmental Quality
CESA California Endangered Species Act

**CFR** Code of Federal Regulations

**cfs** Cubic feet per second

**CNDDB** California Natural Diversity Database

**USCOE/Corps** U.S. Army Corps of Engineers

CPI Consumer Price Index
CSP Concession Services Plan

**dB** Decibels

**dBA** Decibels on the "A" weighted scale

EIR Environmental Impact Report

EIS Environmental Impact Statement

FESA Federal Endangered Species Act

GMP General Management Plan

**gpd** Gallons per day

**gpm** Gallons per minute

**HVAC** Heating, Ventilation, and Air Conditioning

IWSRCC Interagency Wild and Scenic Rivers Coordinating Council

**kWh** Kilowatt hour

L<sub>eq</sub> Energy equivalent level

MCAPCD Mariposa County Air Pollution Control District

Mm<sup>-1</sup> Inverse megameters

MOU Memorandum of Understanding

msl Mean sea level mya Million years ago NAGPRA Native American Graves Protection and Repatriation Act

**NEPA** National Environmental Policy Act

NO<sub>x</sub> Nitrogen Oxide

**NPS** National Park Service

NRI National Rivers Inventory

**NWI** National Wetlands Inventory

**ORVs** Outstandingly Remarkable Values

PA Programmatic Agreement

**PG&E** Pacific Gas and Electric Company

PM-10 Particulate matter

**PSD** Prevention of Significant Deterioration

RAP Restricted Access Plan
RV Recreational vehicle
ROD Record of Decision

**RPO** River Protection Overlay

**RWQCB** Regional Water Quality Control Board

SHPO State Historic Preservation Officer
SNEP Sierra Nevada Ecosystem Project

**SIP** State Implementation Plan

**SJVUAPCD** San Joaquin Valley Unified Air Pollution Control District

**TES** Threatened and Endangered Species

**USC** United States Code

**USDOI** United States Department of the Interior

**USEPA** United States Environmental Protection Agency

**USFS** United States Forest Service

**USFWS** United States Fish and Wildlife Service

**USGS** United States Geological Survey

**VERP** Visitor Experience and Resource Protection

VOC Volatile Organic Compound

YARTS Yosemite Area Regional Transportation System

YCS Yosemite Concession Services Corporation

YNI Yosemite National Institutes

YVP Yosemite Valley Plan